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No. 3.



PHONOGRAM

A MONTHLY MAGAZINE

DEVOTED TO

THE SCIENCE OF SOUND . .

AND

. . RECORDING OF SPEECH.

PUBLISHED BY

THE NATIONAL PHONOGRAPH PUB. CO., L'D.
WORLD BUILDING, NEW YORK.

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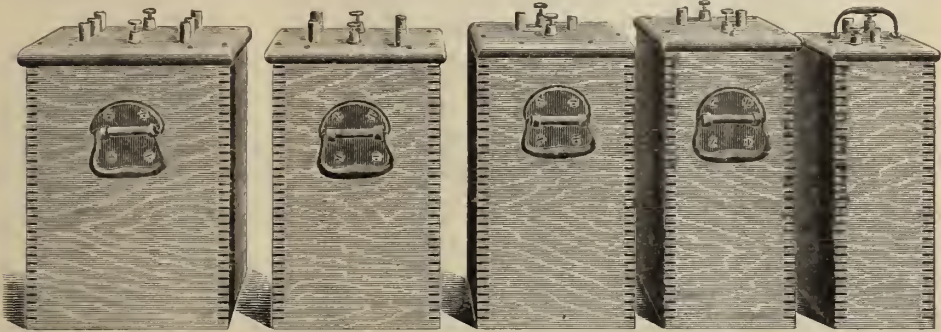
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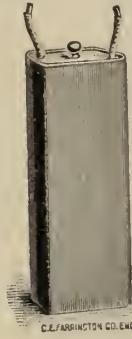
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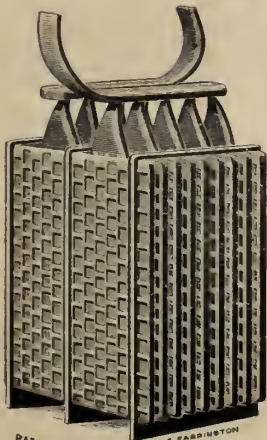
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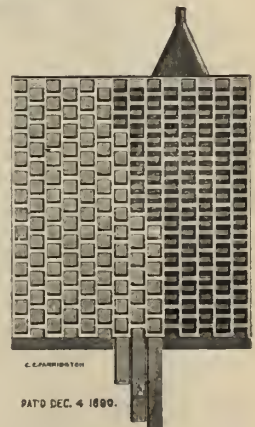
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THE PHONOGRAM.

THE OFFICIAL ORGAN OF THE PHONOGRAPH COMPANIES OF THE UNITED STATES.

VOL. 2.

MARCH, 1892.

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U. S. MARINE BAND.

“Peerless and Unrivaled on the American Continent.”—*P. S. Gilmore.*

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DON'T FAIL TO HEAR IT.

Read What the Famous Gilmore Says About this Band:

MR. SOUSA AND HIS BAND.

Gilmore's High Compliment to this Splendid Musical Organization.

The following letter from Mr. P. S. Gilmore is in reply to one received from the chairman of a committee of prominent business men of St. Louis interested in the concerts soon to be given in that city by the United States Marine Band:

NEW YORK, March 1, 1892.

MY DEAR SIR: I am frequently asked, as you now ask, my opinion of the Marine Band of Washington. Well, the band cannot help being a splendid band, for three reasons. First, its permanent location in Washington is a great inducement for first-class musicians to join the band, musicians who could not be induced to join the regular army, fearing that frontier life might be their fate. Second, the members of

the Marine Band are obliged to attend a long rehearsal almost every day in the year, which alone is sufficient to make them play splendidly together. Third, they are under a director, Mr. John Philip Sousa, who is a most accomplished musician, whose own compositions, as also his admirable arrangements of other composers' works, give abundant evidence of his genius, originality, and artistic ability.

With such a leader, whose aim is perfection, and with the beauty, the culture, and the brain of the nation at the Capital for his audiences—enough to inspire both him and his men to bring forth the most charming effects of which the divine art of music is capable—is it not to be expected that the Marine Band of Washington should stand *peerless and unrivaled on the American continent?* Go, then, and hear them play when you have an opportunity, and you will doubtlessly be convinced that Uncle Sam has a band of which the Government and the people ought to feel, and do feel, justly proud.

Very sincerely yours, P. S. GILMORE.

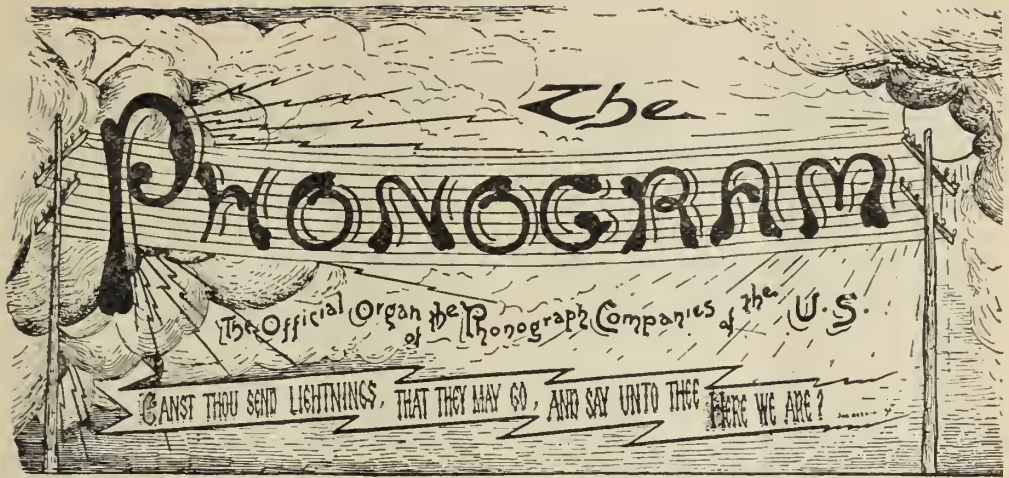
Before the band left we piled up an immense stock of records, Thus, by the aid of the marvellous phonograph, the band is always with us.

Send for new Catalogue, embracing about two hundred Marine Band selections; also, Vocal and Piano, Vocal and Orchestra, Cornet and Piano, Clarinet and Piano, Unique Auction Records, Humorous Recitations, Shakesperean Recitations, the Brady and Casey Series, John Y. AtLee's marvellous Artistic Whistling, and his new combinations of whistling and singing.

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COLUMBIA PHONOGRAPH COMPANY,

627 E Street, Washington, D. C.



A MAGAZINE devoted to all interests connected with the recording of sound, the reproduction and preservation of speech, the Telephone, the Typewriter, and the progress of Electricity.

PUBLISHED MONTHLY.

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V. H. McRAE, Manager,
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ADVERTISEMENTS.

THE PHONOGRAM, having special facilities in its circulation through the vast commercial system occupied by the Phonograph, Telephone, and other Electrical Devices, presents an exceptionally valuable advertising medium. The rates are reasonable and will be furnished on application.

CORRESPONDENCE

relating to the Phonograph, Typewriter, or Electricity, in any of their practical applications, is cordially invited, and the cooperation of all electrical thinkers and workers earnestly desired. Clear, concise, well-written articles are especially welcome; and communications, views, news items, local newspaper clippings, or any information likely to interest electricians, will be thankfully received and cheerfully acknowledged.

Hark, Stenographers, Pause and Listen.

Although the attention of stenographers in particular is invoked in the caption of this article, we desire to include in the call our patrons and a public which has shown itself not indifferent to the work done by THE PHONOGRAM, with the object of making clear the position long since taken by us, that the phonograph is an indispensable adjunct to the business machinery of the world and to the quick-witted a recognized labor, brain and time saver.

We wish to convince stenographers that they have in the phonograph a supporter and

ally, not a supplanter and antagonist. We believe that a thorough consideration of existing conditions as here placed *en evidence* and examination of the array of facts here introduced, will throw a different light on this question.

Everyone who is familiar with the details of a stenographer's or reporter's avocation knows how painfully laborious and wearing they are, and that to those engaged in copying or reporting the proceedings in courts of law or public assemblies, or copying the myriad of papers necessary to the conduct of commercial, literary, scientific, political and financial enterprises, any method that would shorten and simplify their work would prove an inestimable boon.

We shall begin by showing you the prices paid for stenographic work. In a case in the United States Circuit Court the report of the testimony cost \$8,000; the stenographic report of the argument in this case cost \$6,000; A few years since the Legislature of New York authorized the appointment of stenographers in judicial proceedings; New York City alone employs fifty-eight official stenographers, whom she pays at the rates of \$1,800 to \$3,000 per year. Outside professional stenographers for law work receive not less than \$10 for a day or night's work, and more frequently \$15 to \$20. For attendance at any reference case, however short, \$5 is charged."

We quote to make prominent the value of stenographic and reportorial labors.

Now let us examine the *modus operandi* of performing them. In reporting a case in court there are many processes to be gone through, which we will enumerate numerically.

Process No. 1. The stenographer writes out what he hears.

No. 2. The stenographer reads out *his own shorthand notes* to other stenographers.

No. 3. This second corps of stenographers dictate their shorthand notes to typewriters, who take them down in printed English characters. Here, the dictation being in itself a process, there should be a separate enumeration for the typewriting, and we therefore place this under the head of

Process No. 4. Typewriting of shorthand notes.

Now, if we consider that two out of these four processes can be dispensed with, will not that be a saving of time and labor to the stenographers and a gain to employers?

An expert stenographer, who for a long time was engaged in reporting Congress, Mr. E. D. Easton, now president of the Columbia Phonograph Co., of Washington, D. C., gives us the secret of getting through such work in half the time formerly used. He says, "Let the first stenographer dictate his own shorthand notes to a *phonograph*, and then the typewriter comes and takes them in printed form from that instrument." In this way the employer saves the cost of two of the above-mentioned processes, the dictation to stenographers and the transcription in shorthand.

Now, has not THE PHONOGRAM fulfilled its promise of showing the stenographer how to abridge his labors?

But we shall not content ourselves with this single demonstration of the correctness of our position in regard to the necessity of seeking aid from the phonograph. A popular writer in *Perrin's Monthly Stenographer* says that stenography is fallible and the system has its weak points. In No. 2 of that periodical, for February, 1892, this contributor says: "If you begin wrong you cannot expect to come out right; * * * if you carelessly leave out of consideration one single item in the study of the first principles, you will find in the end, to your sorrow, that success is beyond your reach."

This admission is a potent argument in favor of the phonograph, for, if it takes a pupil from six months to two years to learn thoroughly the stenographic art, and if, on the other hand, all phonograph teachers will inform you that a week's lessons on this instrument and a few weeks' further practice will make a good phonograph operator, then

the advantage is on the side of the phonograph.

There are other reasons also going to prove that the phonograph is an aid to the reporter and copyist.

All stenographers know that the least variation in the shorthand signs or characters will in certain circumstances make serious trouble in the text; the fact is, the sign language is very imperfect. They also know that for this reason their report must be read or transcribed in many instances by themselves to others. Therefore, in such exigencies the phonograph becomes a prerequisite.

Mr. E. D. Easton, whose long services as stenographer and whose thorough familiarity with the phonograph give to his opinions on this question a clear value, has published in the last issue of THE PHONOGRAM eight strong reasons for recommending to typewriters and stenographers the use of the phonograph.

These are as follows:

No. 1. The typewriter can work alone.

No. 2. Being independent, he or she can work at any hour of the day or night.

No. 3. Working alone, he can choose the place most convenient for him to work in.

No. 4. The operator governs the phonograph and can work fast or slow, much or little, as suits him.

No. 5. If the operator is a lady, she can work untroubled by the presence of another person.

No. 6. Writing from this instrument, the principal can dictate to a machine while the clerk is transcribing from another, and an important saving of time and labor is made by reason of the stenographer's notes being unnecessary.

In this connection we would likewise state what the experience of many persons has shown, that stenographic work is far more exhaustive than any other of its kind; reporters having been repeatedly known to faint away, on account of excessive fatigue.

No. 7. Writing from machine dictation insensibly but certainly greatly increases the speed of a writer and gives him the best practice.

No. 8. Few persons can afford to dictate directly to a typewriter operator, because this consumes much time and the results thus obtained do not justify the arrangement, but with a phonograph or graphophone, the dictation can be repeated indefinitely.

No. 9. We add to this category a ninth which Mr. Easton includes in his eighth. The

use of the phonograph saves the eye, whose powers manifestly deteriorate when applied to the study of shorthand for any length of time, and whose loss is irreparable.

In making good our promise to show to the public a better way, we have only to add that we believe we are conferring on mankind at large a benefit in making this exposition, and that by the publication of it we hope it may be disseminated so as to reach millions.

The Coming Phonograph Convention.

During the coming month the National Phonograph Association will hold its convention in this city, when questions of unusual interest will be discussed and acted upon.

There is now in sight, for this practical and all-embracing instrument, a career, so to speak, of vast importance, which may be pointed out in the future numbers of this magazine. Since the consolidation of the Edison General Electric Company and the Thomson-Houston Company, a future of wide usefulness and prosperity looms up.

Easily Controverted.

The Universal Typewriter, published at Syracuse, N. Y., imparts to us information so contradictory in character that we are moved to inquire which "horn of the dilemma" this editor intends to have his readers adopt.

In an editorial he remarks, "Progression is never accomplished without the aid of new ideas. All truth is as old as eternity, but new features may ever be added to the category of development."

Now, within a few years past a most wonderful piece of mechanism has been contrived by the fertile brain of Mr. Edison, whose ever-increasing utility is the theme of admiring and grateful patrons in all parts of the world. This instrument forms not only eyes to the blind and ears to the deaf, but usurps three other most important functions of a human being by writing down what is uttered, retaining it in the mechanical storehouse of its memory, and then talking it back at you, whenever you choose to make it do so.

It is employed by the Congress of the United States, a body of men whose wisdom and whose acts are now considered of more force than any other association in the world, for the reason that men have *utterly failed*

by the aid of stenography to compass the tasks necessary to carry on the business of Congress.

It is used in every State in our Union, in every civilized country of the globe; yet it forms the subject of adverse criticism in an article published by *The Universal Typewriter*, in its March number of 1892.

To print the opinions of a contributor means to give them the value of editorial approval, unless the editor expressly disclaims coinciding views on the point in question. Therefore we call attention to this fact as well as to the point we made in the beginning of this review, viz.: the editor's motto. "Progression is never accomplished without the aid of new ideas." Now, if the press undertakes to sneer at the new idea of the phonograph, and to air the opinions of every fledgling of thirteen years old with regard to its merits, where is the benefit of new ideas?

All the points made by this *youthful* writer are easily controverted.

1. He says the phonograph is not easily portable. We reply, it is much more so than a sewing machine or writing table for stenographer's work.

2. "If the phonograph took down all that is said in a court room it would record unnecessary matter."

This critic is not posted, or he would know that there is now a sensitive diaphragm invented, which records whispered sounds and reports them distinctly in a loud tone.

3. "Business men don't want to sit straight like statues before their desks and talk to the machine."

There is no reason for so doing. A flexible tube used at present affords them means of varying attitudes at will.

4. "Even if the phonograph were satisfactory, the salary of a typewritist would equal the salary of a stenographer."

This forms an inducement for the typewritist to learn the phonograph, since it increases her earnings. We might here quote the figures given us by the officers of the World's Medical Dispensary at Buffalo, N. Y., which state that the saving where **FOURTEEN PHONOGRAMS ARE USED** is, in a year, **\$2,133.40.**

5. "Shorthand can take anything but an extraordinary rate of utterance."

The phonograph takes *all rates* of utterance with accuracy, and reproduces them at a speed to suit the will of the transcriber.

6. "If a typewritist has corrections to

make she usually discovers the blunder too late."

Errors may be corrected by reading over the cylinder and in the transcription writing the text correctly. The stenographer encounters the following difficulty—the same signs often have different meanings, and he is obliged to consult the dictator as to the meaning. If the person be absent this cannot be done. The phonograph will repeat the dictator's own words many times over.

7. "Cylinders break in handling, and the dictation may by this accident be lost forever."

We reply, there is a tray made in which cylinders are placed when ready for transcription, and if they are broken it is gross carelessness.

8. "Phonographs are delicately constructed. If they are broken during a session of court, the instrument is useless."

Our answer is, that a stenographer's tools have to be replaced often, and he takes care to have new supplies ready for immediate use. All business men now keep two or more phonographs on hand, if the business is of importance.

Replying generally to this arraignment of the phonograph we say, the next time *The Universal Typewriter* wants an opinion as to the phonograph, let him seek a source whose utterances will be worth the time consumed in writing and printing them.

The Stenographer's Art.

Because electricity has been harnessed and forced to perform such labors as its directors may prescribe, the industries of the world do not resign their hold upon steam, or water-power. Because there are railways and steamers, canal boats and row boats, the express wagon, the truck, van and cart are by no means set aside. On the contrary, each and all of these are indispensable to every community.

Because photography has become one of the arts, and has within a few months past asserted its proper position as one of the sciences, no idea of relegating painting or engraving or etching to the realm of obscurity is entertained.

Therefore we say to stenographers, do not infer from what is said in the columns of **THE PHONOGRAM** with regard to stenography in its relation to recording and reporting,

that any disparagement of this useful art is intended.

Stenography, like all other arts, has its own place, its own function, and will always maintain and deserve recognition.

To the People at Large.

The inhabitants of the United States, as a race, pride themselves upon their interest in and capacity for labor. As a rule in this country, all are toilers; idlers are the exception to the rule. Therefore we address ourselves to the people, for it is they who are concerned in the subject we now present for their consideration. To these toilers we offer information, which, if rated at its proper value and acted upon, will secure immediate advantages.

THE PHONOGRAM, in its relations to the enterprise which constitutes its *raison d'être*, performs in part the functions of a sun-glass; the latter instrument receives the rays of light, and they unite at its center; so far. **THE PHONOGRAM** accompanies it; but, like its prototype the phonograph, it does not stop there, but reflects and diffuses these rays to the outside world.

THE PHONOGRAM is not only proud of its protégé, but watchful of its interests, and anxious for the public to derive all possible advantage from the use of it. Therefore the rays of information in the form of recommendations and favorable testimony in behalf of the phonograph, from the East and from the West, from the North and from the South, are assiduously transmitted in order to declare its praises, and silence the objections and aspersions of its enemies.

Mr. W. E. Davis, of the Chicago and Grand Trunk Railway, writes to Mr. W. S. Gray, manager of the Chicago Central Phonograph Co., that he has had a phonograph for nearly three years, and finds it more convenient than a stenographic writer. He says: "The fact that it is always ready for use is a sufficient warrant for its employment. Prior to the introduction of this machine, I employed two stenographers; since that time I have employed one and find my *business increasing*. As a matter of fact, this one stenographer turns out more work than was formerly done by the two. I would not be *deprived of the phonograph under any circumstances.*"

The prominent mercantile agency of R. G. Dunn & Co. state through their correspondent

that they find the phonograph so useful in their office, that "it has become a fixture." The firm of Harris & Newberger, of Parkersburg, say: "We have used a phonograph three years. It is the coming amanuensis. In one case alone we have done 2,500 pages of *typewriting from it.*" From the Crescent Coal Co., of Pittsburgh, Pa., we learn that in their office one has been used over a year and they cannot get along without it. Letters can be dictated to it, and in the writer's absence will be faithfully copied, which saves much time to the official. This comes from the treasurer, Mr. J. W. Ailes.

Department of Electricity, World's Fair.

We have received a pamphlet containing a birdseye view of the coming World's Fair and a ground plan in which all mechanism is to be exhibited. We prophesy that the interest in this department will be not only intense, but almost universal.

The science of electricity, under the judicious tolerance of American institutions, has assumed a latitude and an importance hitherto unparalleled; not that men of other countries have been unable to conceive and execute plans by which the agency of electricity has been employed to effect objects impossible to the powers of the human race, but that our American genius, Mr. Edison, has distanced all competitors in this field by his invention of the phonograph and other instruments.

The Edison's exhibits will probably present instruments and machinery of a more varied character than any at the Fair.

Chicago Notes.

CHICAGO, January 5, 1892.

W. S. GRAY, Esq., Manager Chicago Central Phonograph Co., Chicago, Ill.

DEAR SIR:—I have your favor of December 28th, in which you ask what experience this office has in relation to the use of the phonograph, and in reply would say that we commenced its use in February, 1889, and since that date up to the present time I have used it exclusively for my own dictation, all letters written by myself or dictated by myself, and I find it, for the purpose that I require, in my judgment, more convenient than the ordinary stenographic writer. It is always ready for use, and this fact alone is of sufficient

merit to warrant its introduction into such offices as mine. I do not know that I can say anything further. I have personally recommended its use to a great many persons who call at my office, and to friends and acquaintances who desired to know something of its operation. So far I believe that generally their experience with it has been satisfactory, but I can only state definitely as to my own. I am entirely satisfied, and would not like to get along without it under any circumstance. As an illustration, would say that prior to the use of this machine in my office, I formerly employed two stenographers. Since that time I have employed one, and our business has been on the increase. As a matter of fact, the one stenographer turns out more correspondence than we formerly did with two.

Yours truly,

W. E. DAVIS,

G. P. & T. A. Chicago and Grand Trunk Railway.

Election of Officers.

The following have been elected associate members of the American Institute of Electrical Engineers: F. DeLand, Chicago, Ill.; Elisha Gray, Highland Park, Ill.; Adolph Graner, electrical patent agent, Philadelphia, Pa.; J. N. James, Electrical Naval Observatory, Washington, D. C.; A. F. McKissick, Professor of Electrical Engineering, the A. & M. College of Alabama; L. M. Summers, Assistant Electrician Western Union Telegraph Co., Chicago, Ill.

Personal.

Mr. T. R. Lombard, vice-president of the North American Phonograph Company, has recently returned from a trip through the Southern States, where he found all phonograph interests in healthy condition. He will very shortly take a westward flight, comprehending in it the States of California, Dakota-Washington, Idaho, Montana and Oregon. He will doubtless carry encouragement to the fraternity in those regions and secure useful information to be disseminated through the columns of THE PHONOGRAM to their brethren of the East.

We learn with regret of the illness of Mr. James L. Andeni, president of the Ohio Phonograph Company, Cincinnati, O. We are glad, however, to announce that he is now convalescent.



A COMMERCIAL PHONOGRAPH PLANT.

H. D. PULSIFER.



SEVERAL years ago, even before the New York State Company was formed, Dr. Lee H. Smith, vice-president of the World's Dispensary Medical Association, applied for phonographs for their business offices. In their offices four phonographs were first placed in the city of Buffalo, after the local office had been opened. The World's Dispensary Medical Association have always been the foremost institution in Buffalo to adopt the latest and most approved methods for carrying on their business. They were the first to adopt the telephone, and were also the first to adopt the phonograph. From year to year they have added to the number of their machines, until at the present time each of the fourteen physicians and the several business departments are equipped with them. The phonographs are all operated by steam power, which runs at a uniform speed over the entire building. The shafting is very light, runs noiselessly, and is not noticeable. The shafting in the two large build-

ings is driven by one Corliss engine, and runs so true, and is so evenly balanced, that by moving the large balance wheel on the engine one may transmit a corresponding motion on the shafting to the remotest parts, of the two buildings, where it is used to operate printing, elevators, binding, machinery, phonographs, etc.

Two phonographs are used for paring-off purposes, and the cylinders are distributed to the dictators on small trays holding eight cylinders, and at certain periods of the day are collected by messengers and taken to the transcribing rooms. A picture of one of these rooms accompanies this article. The transcribing rooms are in communication with the dictators' offices by means of speaking tubes, and when there is any doubt as to the meaning of any medical term or a person's name, the transcriber can call up the dictator at once and settle any misunderstanding.

The dictators can also make their wants known, should they be in need of any cylinders, or should they have letters for immediate transcription. The speaking

tubes all connect into the little telephone cabinet, which shows on the left-hand side of the cut. The transcribers write on an average seventy-five letters per day (some of them being medical examinations, and quite lengthy), the mail at this institution being very heavy, and averaging two thousand letters per day. In some of the offices combination machines,

our business, and we would not part with it even though the expense of transcription from phonographs were as great as it is by stenographers. There is an additional advantage to phonography in that you can extend the number of your phonographers without any trouble. A new stenographer must take a considerable time before he can become accustomed to



Transcribing Rooms, World's Dispensary, Buffalo, N. Y.

have been placed, so that in the evening, when the steam power is not in operation, the machines are driven by storage batteries. In fact, the officers of the institution are so well pleased with the phonographs that the following quotation is taken from one of their letters recently received, (the annual saving over previous methods being \$2,133.40):

“The phonograph has proven a gem in

the special phrasing and peculiarities of speech of his employer; but with the phonograph we find that the time required is very much less. That is, we can break in a new phonographer much quicker than we can a new stenographer and at far less expense. Therefore, as you see, the eyes of the world continue to be further opened to the value of the new machine.”

Phonographs Carried into Africa.

A Moor, Si Hassen Ben Ali, who obtained a valuable concession from the Chicago World's Fair Committee for establishing a Moorish village and a combined African show at the Columbian Exposition, went abroad a few months ago, and has been heard from through a passenger on the *City of Berlin*, that landed in New York, recently.

This gentleman carried to Africa with him, for the purpose of startling and amusing the natives, a complete telephone outfit, a phonograph and cylinders carrying the impressions of musical airs such as "Annie Rooney" and "Mary, Take in the Wash," arrangements of music from the banjo, negro dialect recitations and orchestral music, a powerful electric battery, some Edison talking dolls, and an outfit for sinking artesian wells. It is needless to say that with these appliances he produced a *sensation*.

Si Hassen, when last heard from, was at the court of Moulay El Hassen, where he made a speech, saying he had been sent by Allah to do good among the people of Africa, and he states that the "phonograph and talking doll are more potent than a Krupp gun, for an armed force would meet with opposition in Africa, whereas taking with me these harmless inventions, I can go single-handed among the wildest natives. With the apparatus for sinking wells I can paralyze them, figuratively speaking, for by this means water can be practically 'wrung out of a rock.'"

Two giant natives were induced to take hold of the insulator of an electric machine, and when they found themselves held fast by the unseen power and compelled at the will of the operator to get down on their knees, they were awestruck, and when the experiments were concluded ran away and never stopped till they reached the sea-coast.

Wonderful Names for Colors.

In the Chemical Encyclopedia, Messrs. Girard and Pabst have described the azoic series of coloring matters, and they now give the aromatic series. Their book is one of chemical industry, though it does not at all exclude high scientific observations; but they desired to indicate the reactions used in the industry, and they give innumerable patents relative to the manufacture of different colors. Many of the new colors bear the names of constitution, some of which are truly extraordinary, as, for example—*Metaoxytetramethyldiamidiodiorthoeresylphenglmethane*. The preparation of these colors is given with all the necessary details.

In a Hundred Years.

The article written by Mr. Charles Richet, entitled "In a Hundred Years," and published by the *Revue Scientifique*, promises to the human race an increase of its comforts and a diminution of its hardships. The author believes that not only water and gas will be supplied to cities, but electricity, as a motive power for light and heat, which will circulate in long conduit pipes.

There will be telephones, phonographs and perhaps also telophotes, which enable one to see actual, distant scenes, and not only what is really taking place at the moment of using the instrument, but representations of ancient scenes reproduced by some special process.

As to photography, there is scarcely a doubt that even the instantaneous production of colored photographs will be obtained. This will probably be the finishing period of this admirable invention; for when once the instantaneous production of things, with their colors and their relief is obtained, one can hardly imagine what remains to be done.

WILL IT PAY?



THE coin-in-the-slot machine is in its infancy. Its progenitor was the penny-in-the-slot machine, which loaned its influence to various trades and associations; for instance, the fruit-vender found in it a potential ally—it deprived Mr. Fairbanks of many a dollar, it slyly diverted the “nimble sixpence” from the grasp of the perambulating tradesmen who would “shock you” for a penny, and hence derived its cognomen of “shocking machine.” Other branches of business were also monopolized by it, but we will not stop to consider these because there is so much to say in its behalf. For all its employers it has realized large profits.

And so has its competitor the nickel-in-the-slot phonograph; not only keeping up the pace, but outstripping it in the quality of a money earner, as has been authoritatively stated in *THE PHONOGRAM* by the heads of phonographic companies. In certain localities it has yielded \$60 per day. The receipts of the Louisiana Company, under Mr. Hugh Conyngton, of New Orleans, are published as follows:

Receipts to April 8th, one month....	\$518.85
“ “ May 8th, two months... ..	1,017.85
“ “ June 8th, three months... ..	1,420.80

Mr. J. C. Wood, General Manager of the Missouri Phonograph Co., writes: “The nickel-in-the-slot machine has kept steady growth with the other improvements, and it is almost impossible to succeed in operating it without placing the necessary nickel in the slot. “Each cylinder can be used about fifty-five hundred times.”

At Spokane Falls, Washington Territory, Mr. J. W. Wilson states that many phonographs have been placed in the mining towns, and they have proved very

profitable. The fraud of slugs and the item of freight on storage batteries have been successfully overcome, and now the company is not only entirely out of debt, but will be on a dividend-paying basis in a few months.

The fact is, the industry is assuming such proportions that companies are being formed for its propagation, all over the country.

The phonograph is now considered an accompaniment to the traveler’s journeying appendages, as indispensable as his gripsack. Why? Because he keeps with this his diary, recording every sound or event deemed worthy of record around him; just as he imprints all sights or scenes with a Kodak.

This is likewise an enduring diary.

Few persons reflect what a power this instrument possesses in its capacity of recording and retaining music, oratory and all sounds.

1st. Let it be remembered that in towns distant from great cities, of which there are so many hundred thousand in the United States alone, this piece of mechanism enables one to hear, at the cost of five cents, what it would cost five dollars to hear in New York—that is, Patti, Albani, Campanini and the De Reskes, or an oration from some professor in any of our great universities, or the learned lectures of a Tyndall, or Huxley, a Tesla or a Thomson. The genius is thus brought to them. They lose it otherwise.

Phonographs can be propelled by water, steam, electricity, or by the treadle.

As to batteries for running them, the storage and primary batteries have now reached such perfection, and their current is so uniform, that they forestall all other motive power.

Discussions with regard to the merits of each of these have taken place. The storage battery has warm adherents, and the Edison-Lalande battery, we may safely



WILL IT PAY?



say, is ahead of all other primary batteries for giving continuous and cheap power. We believe that persons who will give this battery a fair and thorough trial will be convinced that of all primary batteries, it stands unrivaled in this field. We speak knowingly on this subject. *Crede Roberto esperto.* No battery, however, can perform the functions it is designed to fill without receiving *intelligent* care. It is for the want of this necessary attention that batteries are so disappointing. In Brooklyn there are five coin-in-the-slot phonographs which are run by an Edison-Lalande battery.

To sum up the usefulness and merits of the coin-in-the-slot phonograph, we answer the question of the damsel on the opposite page, in an emphatic manner, by saying, "It will pay," and we state further, that it will continue to pay, and its novelty will never diminish.

As great inventions successively appear, the phonograph will be their exponent and will stereotype them, so to speak. Therefore, this machine will never stand idle.

The President of France, the wise and great M. Carnot, says of the phonograph: "Je suis content de voir votre merveilleuse machine" (I am much pleased to see your marvelous instrument), and the great German General Von Moltke also gave it the tribute of his praise.

The United States Marine Band is now making a tour of the United States and will be absent from Washington until early in May. The Band goes as far West as San Francisco, and thence North to Oregon and Washington. Previous to their departure they were engaged every day by the Columbia Phonograph Company. An immense stock of records was thus laid in, the largest ever thus accumulated in the business. The sale of musical records by the Columbia Company is developing with great rapidity. More records were sold in March than ever before in the history of that company, which now claims the bulk of the musical record business of the United States. **

Connection Between the Mind and the Body.

We are informed that what is figuratively called the storehouse of the mind is really the dwelling of all its faculties. The mind may be considered an immense empire of innumerable spirits that live together in the narrow space of about a quarter of a cubic foot. Spirits they are, because they are psychological existences. Yet at the same time they are material realities, having living forms of bodily presence sustained by the nourishing currents of the blood—nourished by its oxygen, which surrounds them in the delicate capillary vessels.

This vast spiritual empire in the brain is excellently provided with telegraph lines for inter-communication. By means of these, associations of ideas are formed. When a certain number of ideas associate themselves together so as to form something new, as, for instance, an invention or a poem, the discovery or inspiration is ushered into our consciousness as from without. Is it to be wondered that the poet, the artist, the prophet, are under the impression that they are merely instruments in the hands of a greater Being than themselves.

Different kinds of memories are scattered over the convoluted surface of the brain; they are not grouped in distinct tracts separated by defined boundaries. Yet there are spaces in which the same kinds of memories are thickly crowded. On the sides of the head above the ears are the homes of sound; there live all the old songs and any music which has impressed us. Close to these, in the folds of a fissure called "Silvius," live the words of our mother-tongue and the verses and incidents of our childhood. The front corner of the sphenoidal lobe is the seat of smell—all odors, whether pleasant or otherwise. Beneath the back of the skull lie all images of our friends, of landscapes

and of former sights. Behind the bony walls of the forehead lie abstract ideas—philosophical and mathematical problems. On the top of the head sits the power that moves all our limbs. This is the engineer that guides and runs the machine called the body.

If a frog is deprived of his brain, he can afterwards swim or jump, but will never take food, and finally dries up like a mummy.

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Electric Tramway.

In the course of next summer, the first electric tramway in Russia will be put into operation at Kiew. They are now constructing it, and the system adopted is that called the aerial conductor system.

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Patent Suit Covering Long Distance Transmission.

An important patent was issued in March, by the United States Patent Office, to Marcel Deprez and Jules Carpentier, of Paris, France. The patent is very broad and covers the subject of the transmission of electrical energy to long distances. It was taken out in France and Great Britain, in 1881, and in the United States in 1888.

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Automatic Machines in Modern Greece.

A description by Prof. Rogers, in "Learner and Teacher," of scenes and striking objects in this interesting kingdom, which despite its cramped financial resources and general lack of national enthusiasm on the subject of material improvements, is by no means an effete state, brings out the facts that modern inventions are there springing up, and modern methods are being adopted; notably in the direction for means of rapid transit. Railroads extend from the Piræus to Athens, thence to Corinth, Patras, Pyrgos, Argos and Nauplia. He

also learns that in 1833 there was scarcely a carriage road in all Greece, and up to 1869 there was not a mile of railroad. In the latter year, a railroad was built from the Piræus to Athens, and some years later a continuation of this line from Athens to Corinth. This line extends likewise to Patras, and down the western coast to Pyrgos (near Olympia), while another line runs from Corinth to Argos and Nauplia, and will soon be continued to Sparta and the southern coast.

He ascertained that the Grecians had caught the fever of modern invention, which was manifested in the adoption of electric lights, and in the exploiting of mines worked by Themostocles to obtain money for the building of his fleet for Salamis, but now being worked over by several companies with great profit for lead. It is, properly speaking, the refuse heaps, mountain high, that afford lead to the modern workmen; as no actual mining is done at present.

The objects attracting most the attention of strangers while passing through the modern part of Athens were the nickel-in-the-slot machine for weighing, and a part of the inscription on these runs as follows:

Ρίψη έντος τής οπής δέκα λεπτά (μιαν δεκάρα). Παρευδύς ο Δείκτης Δεικνύει το βάρος του.

which translated means, "You put a nickel in the slot, and you will get your weight." He says, "I think Homer and Xenophon would understand this perfectly."

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To the Editor of THE PHONOGRAM:

DEAR SIR:—We are in daily receipt of enthusiastic letters indorsing the phonograph for business purposes. I send you herewith a letter just received from one of the largest firms in the Cotton Exchange, together with a photograph showing the phonographs in operation in their busy office.

Trusting the letter and accompanying photograph will be of interest to your readers, I remain,

Yours very truly,
RICHARD TOWNLEY HAINES,
Secretary New York Phonograph Co.

An Injunction Granted.

Judge Green granted a preliminary injunction against the Accumulator Company in the United States District Court at Trenton, N. J., recently. This injunction was to protect certain patents held by the Brush Electric Co.

The defendants opposed the granting of the injunction on the ground that they

Mr. Alexander T. Wurts.

It is now about a year since a series of interesting communications from the pen of Mr. Wurts was published in this journal. One of these articles, "The Nature of Electricity," was copied in a prominent electrical review, and at the present writing we find the drawings of his inventions and his written expositions of electric



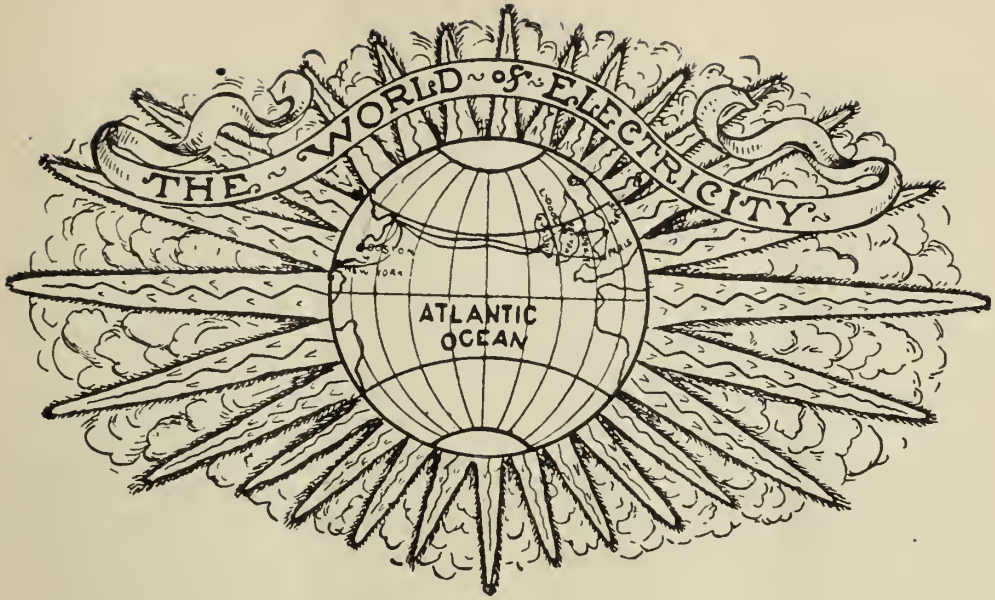
Interior View of Offices of Hubbard Price & Company, fitted with Phonographs, Typewriters, etc.

had new evidence to the effect that Dr. Blanchard, of Vermont, discovered the storage battery twenty years before Mr. Brush's invention on storage batteries. This brings up an interesting question.

The latest fad, "Telegraphy by telephone." Try it.

work to have obtained a conspicuous and well-deserved position in the foremost electrical magazines of this city.

Mr. Wurts has recently delivered a most interesting lecture before the American Institute of Electrical Engineers on "Lightning Arresters and the Discovery of Non Arcing Metals."



THE FUTURE OF ELECTRICITY.



BEFORE the Association Française for the advancement of science, the following address was recently delivered by Mr. Hillairet :

I am going to endeavor to foresee what limits are possible to electricity in the future. I do not ignore the fact that by this process I shall be forced to break with all traditions ; it is the rule here to speak only of the past and the present, which are certain things, without entering upon the future. But the subject is so tempting that I cannot resist the desire of treating it in your presence.

The dynamo-electric machine, that ideal piece of mechanism which engenders current when one applies force to it, and renders force when one gives it current, brings at the present time most important modifications into almost all branches of industry, by its applications to electrolysis, to lighting and to transmissions.

The electrolytic process of refining copper, which owed its industrial origin

twenty years ago to Hamburg, with a daily production of several hundreds of kilogrammes, has developed to a point where the similar metal works of the entire world have reached twenty-two in number, and produced daily twenty tons of chemically pure copper.

Further than that, the chemical purity of this metal is no longer the sole object of electrolytic treatment ; the present demand is, to obtain directly, in the bath, metal fashioned into tubes calibered to one one-hundredth of a millimeter, and into plates of such a quality that the laminator formerly used would be powerless to rival the electric process of fashioning.

The authors of this process, the brothers Elmore, conceived the ingenious idea of crushing with agate the crystals which the current on the cathode of copper deposits, to obtain an amorphous metal, resistant in all senses, and with a tenacity very superior to that which has been produced on metal fashioned after having already been run down.

The copper matts containing as much as forty for one hundred of iron will not henceforth pass through the fire, and will be enriched to the most extreme limits by the humid way (employing dissolvants), like the coppers at ninety-five for one hundred.

The total consumption of copper for the whole world reaches five hundred tons a day: up to the present time, electrolytic refining furnished only four in the hundred of this consumption. The Elmore works, established at Dives (Calvados), which is the most extensive refinery now in operation, will ere long attain an actual maximum of production, of about fifteen tons a day, almost as much as the united refineries of the world

But there will be a still further margin for the future developments of this metallurgic treatment, and no doubt that in a future not distant, and by reason of the moderate price of electrolytic refining, the five hundred tons that daily flow out for consumption will proceed exclusively from our refineries. At this time the furnaces will employ not above twenty-five thousand horse-power for that purpose. Aluminium, of which the electro-metallurgic treatment has produced, in less than three years, a fall of price from over a hundred to less than twenty francs, becomes the exclusive *apanage* of our electric methods. The entire production of this metal does not actually exceed one ton per day. The works of Saint Michel (Savoy), employing the Minet process: the works of Froges (Isere), of Neuhausen (Switzerland), with the Killiani process, and of Pittsburgh (United States), with the Halle process, have successively appeared within three years.

What the future of this metal and the development of these establishments will become, it would be difficult to say. It is certain that the very feeble specific weight of this metal (aluminium), which

weighs, at equal volume, about three times less than the ordinary tenacious metals, constitutes an appreciable merit. Yet the chemical affinities of this metal, especially greedy of oxygen, assure for it in certain metallurgic operations, an opening which no one could have anticipated, and which taken as a last expedient, will become, in our opinion, the immediate resource of actual producers.

Further reference to aluminium is made in the *Revue Scientifique*. It says:

Mr. Wickersheimer gives us the metallurgy of aluminium, a most interesting study. Its principal characteristics are lightness, sonorosity, and resistance to chemical agents. It is about the most unalterable of metals, gold and platinum excepted. When dissolved with other metals, it modifies enormously their qualities, even when introduced in very small quantities. Bronzes of aluminium have remarkable qualities, and their cost is not high, since bronze made of aluminium at five for one hundred, only costs one franc thirty-two centimes (about twenty-six cents). This bronze is two and a half times lighter than the ordinary bronze. Mr. Wickersheimer recommends it for cables, the helices of ships, and for machinery in general. Mr. Keep, of Michigan, recommends its introduction into Bessemer steel. It only costs twenty francs the kilogramme when obtained by electricity, and sometimes fifteen francs; and it is not impossible that in a few years it will be sold at ten francs or lower.

Aluminium is therefore the metal of the future, and that future promises to be very brilliant.

The Reynier Elastic Accumulator.

Since storage batteries have become the want of the hour, it is well for manufacturers, as well as intending purchasers, to examine the various sorts now in the market, in order to assure themselves

as to the suitability of such as they deem best adapted to their needs.

Many years ago a battery was invented by M. Emile Reynier, of Paris, France, to be used by the French Navy. It possessed so many points recommending it to use that it became at once a favorite, and was used for electric tramway and other purposes in France.

We give here a *resume* of its construction and capacity, and we desire to say in regard to the question of its merits, that our readers avail themselves of the opinions of experts.

On this subject a writer in the *Electri-*

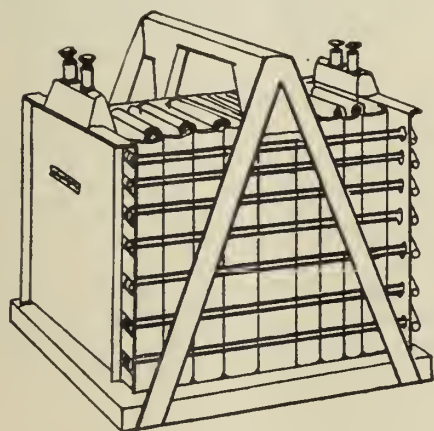


Fig. 1.

trical World makes this significant remark, "The accumulator * * * has hardly received in this country the attention it undoubtedly deserves, and, as a consequence, in this particular field our European brother electricians are ahead of us." Again, "The storage battery possibly more than any other piece of electrical apparatus in commercial use, demands *intelligent supervision* and management in order to get from it the best possible results." This authority is Mr. J. Stanford Brown.

The object we have in view is to call attention to a foreign patent which is meritorious.

In Mr. Reynier's first design each cell

was contained in a varnished sheet, lined with India rubber, and was composed of two positives and one negative, separated by sheets of porous silica, the two end sheets being fluted, to increase the space available for the electrolyte, the quantity of which was, however, small. In the recent instructions given us by Madame Reynier, who disposes of the patent to us, vessels of pure lead are used, the proper flexibility being obtained by surrounding the lead cell with an expansible corrugated case. A number of cells are constructed in series and placed between two rigid end pieces drawn tightly together by strong springs. This arrangement gives the active material considerable artificial elasticity, which enables one to obtain a high rate of discharge and to obtain a high output for a given weight. The expansions and contractions of the plates can take place freely without disintegration, owing to the action of the springs. There is a difference in length of as much as six per cent between a completely discharged and fully charged battery. Moreover, the active material being constantly under pressure, there is no need for heavy, grid-like supports. Finally, the plates and the cells being held together in this elastic manner, they are able to withstand severe shocks, and are from that point of view alone peculiarly suited to the exigencies of traction work. The annexed figure represents a storage battery of the latest type. It consists of sixteen cells mounted between end pieces of hard wood, strengthened by iron bands. The following are some of the figures with regard to this particular type :

- E. M. F. (full), 32 volts.
- E. M. F. (at terminals), 28 volts.
- Discharging current, 3 to 6 amperes.
- Average available energy, 150 Watts.
- Capacity, available energy 38 ampere hours.
- Work (available), 740 Watt hours.
- External dimensions: length, 16 inches; breadth, 12 inches; height, 12 inches.
- Total space occupied (less), 1.5 cubic feet.
- Total weight 110 pounds.
- Weight per, watt hour, 15 pounds
- Watt-hours per pound of cell complete, 6.73 pounds.
- Volume per watt-hour, 3 cubic inches.

IMPROVED BATTERY—STOP AND START DEVICE.

A device has recently been invented which greatly increases the efficiency of the phonograph as a labor-saving machine in office work, and by the use of which the battery that furnishes the motive power for running the phonograph is made to last twice as long as at present.

By means of this device the diaphragm and the motor are controlled by the knee, leaving the hands entirely free. When the device is in its normal position the electrical circuit is broken and the diaphragm needle is raised from the wax cylinder. A slight pressure of the knee against the lever of the device makes the electrical circuit and sets the motor in motion. An additional pressure, which is also very slight, causes the diaphragm needle to come into contact with the wax cylinder. By releasing the lever, which is done by simply moving the knee away from the lever, the diaphragm needle is automatically raised from the cylinder, and the electrical circuit is automatically broken, and thus the motor is brought to a state of rest. By the use of this device, the average typewriter operator is enabled to produce one-third more copy, and one-half the electricity which it now takes to run the motor is saved, as will appear from the following illustration:

Suppose the following words have been dictated to the phonograph: "I have received your letter of the 5th instant, and in response thereto—." When the typewriter operator desires to transcribe these words, he presses his knee against the lever of the device, and the motor begins to run as soon as the lever is touched by the knee. The lever is then pushed by the knee a distance of two inches only, and the diaphragm needle is lowered to the wax cylinder by the device, and the operator hears the words, "I have received your letter of the 5th instant." As soon as the word "instant" is spoken he releases his knee, while he is writing, and the phonograph instantly stops talking, and the motor ceases to run. When he desires to transcribe the remaining words, instead of taking his hand from the typewriter to lower the diaphragm and thus make the phonograph repeat the next clause of the

dictation, as is done at present, the operator simply presses his knee against the lever of the device, just before he finishes writing the clause which the phonograph has spoken, and the phonograph repeats the next clause, "and in response thereto." Therefore, the operator continues to write on the typewriter without taking his hands therefrom, and without loss of time between the clauses which the phonograph repeats, and the motor is in a state of rest during a large portion of the time the operator is writing on the typewriter.

This device revolutionizes transcription. The difference between the present method and the proposed method (using this device) is the difference between writing from copy and writing from dictation, which all typewriter operators will appreciate at once.

Besides these advantages may be mentioned the following:

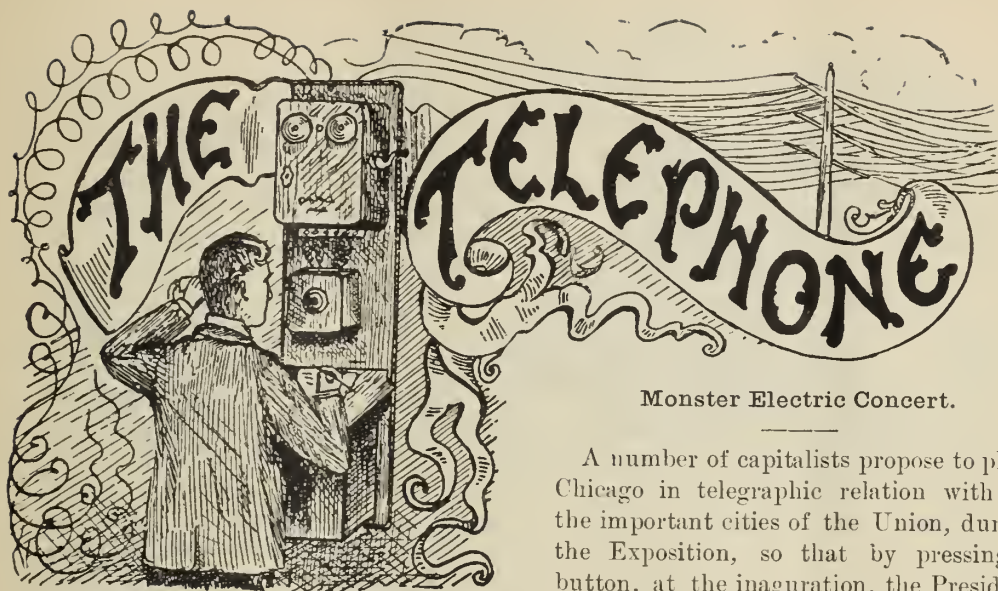
1. The device *always* returns the needle to the proper point on the wax cylinder.

2. When the operator, either dictator or transcriber, leaves the phonograph, it stops automatically, so that there is no waste of electricity or unnecessary wear of machinery.

3. If the dictator uses the device he has one hand entirely free, while at present one hand is occupied in holding the dictating tube, and the other is frequently used in raising and lowering the diaphragm.

This device has been in successful operation in one of the Government offices in Washington for two months, and the clerk who operates it there, often, in his every day work, writes a whole letter-size page from the phonograph without interrupting his typewriting. He writes with both hands continuously. Furthermore, the inventor has the opinions of two electrical experts, which are to the effect that the device will save from twenty-five to fifty per cent of the electricity, varying, of course, with the degree of expertness of the operator.

For further information the reader is referred to the inventor of the device, Henry T. Holtz, 508 First street, Northwest, Washington, D. C.



Monster Electric Concert.

A number of capitalists propose to place Chicago in telegraphic relation with all the important cities of the Union, during the Exposition, so that by pressing a button, at the inauguration, the President can determine the time for setting in motion the machinery. There will also begin a formidable charivari in America represented by a general striking of all the clocks and a burst of harmony in all the cities. The inventors of the project speak of producing thus "the greatest mechanical, electrical and musical concert the earth has ever seen."

Telephonic Item.

At Jacksonville, Florida, the phonograph company rang up the editor of the *Telegram*, and asked if he had ever heard a phonograph sing through a telephone. Upon replying that he had not, he was told to listen, and found that music taken on phonographic cylinders some months previously was being produced in a Northern city and conducted to Jacksonville through the telephone. The notes of the piano and cornet were distinct, and when they ceased the applause of the audience was rendered in loud tones.

Process of Catching and Retaining the Chimes of St. Paul's Cathedral, Buffalo, N. Y.

A record of these chimes was taken by Mr. Howard Pulsifer, agent of the New York Phonograph Co., at the cathedral of St. Paul in Buffalo, N. Y., in the presence of a party of guests, assembled to witness the method of reproduction on the phonograph. The instrument being placed in proper position on the lower floor of the belfry, a good record was secured.

A reporter who was present inquired why Mr. Pulsifer placed the machine so far away from the bells,

Mr. P.: "Because the vibrations or sound waves are too strong or heavy when the machine is placed nearer."

Reporter: "What would be the result if you placed the machine closer?"

Mr. P.: "The heavy vibrations would

A New Telephone Line.

A new telephonic cable is to be laid between London and Paris, so that responses can be made to communications, which become more numerous each day between the two cities.

The post-office is likewise going to establish telephonic pipes connecting Ireland with Great Britain.

The price of aluminium, at the works of Neuhausen (Switzerland) has fallen from 1,000 francs to 625 francs for one-hundred kilogrammes.

cause this little needle, which is attached to the diaphragm, to jump up and down with an irregular motion, thus producing a grating sound, and one in which there would be no harmony nor music."

Reporter: "This record of the bells, then, must be a very difficult one to obtain."

Mr. P.: "Yes, it has only been within a short time that we have been able to obtain the record of bells on pipe organs. We have been experimenting with the machines, in different positions, but could never obtain a satisfactory record before."

Reporter: "What becomes of the cylinders on which you have obtained the records?"

Mr. P.: "Many are spoiled from one cause or another and cannot be used. Those which are perfect are sent to New York City for inspection, when, if found satisfactory, they are sold, and many are kept here for sale. They command from \$1 to \$1.50 apiece, according to the estimated value of the record."

To catch the music of the organ, the machine was placed inside of that instrument in such a position that with pipes above, in front and on either side, there was little chance for any sound to escape. The exquisite music rendered by the organist, Mr. S. J. Gilbert, and the dexterity of Mr. Pulsifer in catching its reflected notes together, constituted an entertainment long to be remembered by those who had the good fortune to be present.

The Omaha Bee Bureau of Claims.

This bureau began its work in Washington in April, 1891, in one room in the four-story building at 618 F street. Within nine months it had spread over every floor and monopolized the entire edifice. The incentive to the organization of this bureau was the fact that many unscrupulous persons, who represented them-

selves able to accomplish wonderful things in behalf of their clients, if provided with the necessary means, were endeavoring to push the pension and other claims held by thousands against the Government.

The front rooms on the first floor are crowded at present with the general counsel, the heads of the Indian depredation and land departments and their clerks. The scene in that buzzing hive is a busy one even now, but it is quiet compared with what it would have been, but for the timely invention of the phonograph. This modest little instrument does the work of a half dozen stenographers. Almost all the correspondence of the bureau is done by the efficient aid of electricity. The attorney in charge of the correspondence talks his letters into the phonograph, whence they are transcribed by the staff of typewriters.

Back of these departments is the private office of the manager of the bureau. At a table near Mr. Wedderburn's desk, a clerk sits all day copying addresses, and from a closet at the end of the room the click of the typewriter and the hum of the phonograph assert themselves unceasingly.

The World's Electrical Congress.

The Electrical Committee of the World's Columbian Exposition, consisting of Professor Elisha Gray, Col. R. C. Clowry and Professor H. S. Carhart, Professor Gray, chairman, has issued a preliminary address, stating that during the World's Columbian Exposition it is fitting that men in all departments of science and industry should come together for interchange of thought and the discussion of subjects that have to do with the great activities of life. The time of meeting will be most auspicious, and all electrical societies in the world are invited to send representatives, so that the world's best thought will be centered under the shadow of the greatest palace ever seen.



THE "RESPECTABILITY OF TYPEWRITING."



CONCERNING the typewriter the public feels interest, and it is well that the article on "Respectability of Typewriting" has drawn out so able a defence as that by Mr. Frank E. Nevins, of *The Shorthand Review*. This is a

topic that has for a long time required notice, and the doubt implied in the questioning of its honorable character shows innate debasement of nature united to gross ignorance.

A typewriter is an amanuensis. There have been clerks and copyists among women, all the world over. We never heard aspersions cast upon this avocation or those women conducting it until recently, and it is right that the matter should be fairly argued, and the gist of it laid before the people. Why should the lady operator be subjected to humiliation on account of her occupation in this especial kind of labor? There really is no reason worthy of a moment's consideration that can be offered in justification of the position. Trained nurses are employed and respected everywhere. Their duties present the same complications, but they are not made universal targets for satire and slander.

Woman was created to travel along the road of life with man, but not to be the object of his jeers or abuse. It is time to

call a halt just at this point. Men as a class are the proper authorities to rectify this intolerable grievance.

◆◆◆◆◆ Typewriter Topics.

The success of the Densmore Typewriter has been magical. It has been on the market but a few months, yet the demand for machines in London, New York and other places, has been several times greater than the Company can supply. The factory facilities are being rapidly increased, and it hopes within a short time to be able to supply its orders.

◆◆◆◆◆ The Commercial Phonograph.

The commercial use of the phonograph is spreading with great rapidity in Washington. Busy men are beginning to realize clearly the great value of the phonograph as a time and money-saver; and where once the instrument is thoroughly understood, it becomes a permanent part of office equipment. Two points of great importance, which should never be lost sight of when presenting the phonograph, are:

1st. With the phonograph the dictator works alone, while if shorthand is used, two persons are required for the dictation, one to talk and the other to write.

2d. The time of the stenographer, which under the old method was spent in receiving the dictation, is now available for other service.

THREE BUSY MACHINES.

W. S. GRAY.

The phonograph in Chicago has come to stay. There has been more or less opposition, principally from stenographers, who thought the phonograph would deprive them of a means of livelihood, but since they have come to realize that by using it they can do more work and in

and take the time necessary to learn a new and better way by calling to their aid the phonograph and applying it to their daily work.

Another serious obstacle with which we have had to contend in placing phonographs in offices for the dictation of letters,



No. 1.—Dictating and Transcribing Room of the A. N. Marquis Publishing Co., Lakeside Building, Chicago.

this way increase the value of their services to their employers, they are, as a class, regarding the phonograph with a little more friendly spirit. It is not alone the prejudice of stenographers, however, with which we have to deal, but perhaps the natural unwillingness on the part of our business men to deviate from the methods to which they have always been accustomed

etc., has been the fact that the majority of men whom we approach have either never heard the phonograph or know nothing about it, except as a toy or machine that will reproduce music and song. It does not seem to strike them when they are listening to the phonograph sing and talk that it could be used in any other way. When they find, however, that

there is really "something new under the sun," and try the phonograph, they are soon convinced that it is a good thing for them to have, and wonder how they get along without it before. I wish to call the particular attention of those who think the phonograph is all right in a general

phonograph than any other man in Chicago.

The letters accompanying cut No. 2 are from Mr. John I. Beggs, district manager of the Edison General Electric Co., and Miss C. Church, the head of the stenographic force in the Chicago office.



No. 2.—Transcribing Room and Mailing Department of the Edison General Electric Co., Chicago.

way, but prefer to wait until others have proved its usefulness, as well as of those who still regard the phonograph as a toy, to the following letters from parties who know by personal experience what the phonograph will do. The first letter is from Mr. John L. Leonard, the gentleman seen in cut No. 1, who is certainly qualified to write on this subject, as he has probably dictated more matter to the

These letters speak for themselves, and I trust will be the means of showing the phonograph in a better light to those who have heretofore regarded it with indifference.

March 31, 1892.

MR. GRAY, Central Phonograph Co.,
Chicago.

DEAR SIR:—In compliance with your request, I give you the facts concerning our use of the phonograph. We are using

at present nine phonographs, distributed as follows :

- Three in Mailing Department,
- Three in Supply Department,
- Three in Executive Department.

Those in the mailing department are used in connection with the typewriters, and also for shaving the cylinders. Each operator gets out on an average, eighty-five letters daily, only working moderately. If the entire time of each operator was confined to writing from the phonograph, I think they could get out from 135 to 150 letters daily. The length of letters varies from about one-third to a full page. The three phonograph operators get out the work of eleven dictators, besides doing considerable other work, one of the young ladies being a stenographer and about half her time being given to shorthand dictation.

Yours very truly,
C. CHURCH.

WALTER S. GRAY, ESQ., Manager, Chicago Central Phonograph Co., 141 E. Van Buren street, Chicago.

DEAR SIR:—Replying to your inquiry of recent date as to our experience and satisfaction in the use of the phonograph, we would say that we have been using them in our office here for about two years and are entirely satisfied with the result. We commenced with only two machines, but have increased in number from time to time, as our operators became accustomed to them, until we now have eight in everyday use, and I intend to still further increase the number here, as it enables us to handle our heavy mail much better and easier than in any other way, the time of our typewriters being very greatly economized, as well as those who have to give dictation.

I might say, that we use the phonograph for the above reasons, and not because, as many might suppose. of

Mr. Edison's connection with this company.

Yours very truly,

JOHN I. BEGGS,
District Manager, Edison's General Electric Co., 175 Adams street, Chicago.

A few days ago I was requested by Mr. Gray, manager for the Chicago Central Phonograph Company, to write for THE PHONOGRAM an account of the use made of phonographs in the office of A. N. Marquis & Co., publishers of this city, by whom I am employed as editor. That firm, in addition to a general publishing business, has a department devoted to special publications in regard to the industries of the American cities, with sketches of the principal manufacturing, commercial and financial institutions, doing probably the largest business in that special field in the United States. The data for this work is procured by a staff of reporters, whose rough notes are sent to the office in Chicago, and are put into connected narrative by myself as editor.

In this work, as carried on by this firm, not only is facility of expression necessary, but the large volume of work to be done requires the most speedy execution. The ordinary method of dictating to stenographers I had tried with results never satisfactory to myself. Even with the best stenographers, dictation would at times be interrupted while making references to data; proper names, which are frequent in the work, had to be written out in the notes in long hand, and numberless delays and annoyances made the output much smaller than was desirable.

In July, 1890, after investigating the merits of the phonograph, we introduced two of them into use in our office and a month later added a third; and these three machines have ever since been in constant use in my work. The result has been a marvelous increase in the quantity of work

turned out and a decided improvement as to quality. As we now operate them, I doubt if there are three busier phonographs in existence. For dictation purposes I use the ordinary typewriter attachment, lifting and lowering the diaphragm by finger motion. For the typewriter operators the attachment is operated by treadle, leaving both hands free. For paring cylinders I use a Perret motor fastened to the back of the phonograph table used for dictation. The pulley wheel of the motor is directly in line with that of the mandrel shaft of the phonograph. A turn of the screw loosens this latter so that the belt can be taken off and a string belt substituted in a moment, connecting the Perret motor, and in about twenty minutes from three to four dozen cylinders are pared, the belts replaced and the phonograph is ready for work. A day's dictation frequently amounts to forty cylinders, and I have dictated as many as four dozen. The usual day's work amounts to three dozen cylinders, which, allowing six hundred words to the cylinder (it is never less than that) amounts to 21,600 words per day of eight hours.

But it is not only in speed in dictation that a gain has been made. There is no time lost in deciphering notes, and the transcription is therefore remarkable in its accuracy; in fact, I frequently permit the matter written from the phonograph to go to the printer without reading it, so absolutely free from error is the matter so transcribed; while the speed attained by the typewriter operators is much greater. One young lady, who has worked for me nearly three years, has attained a greatly increased rate of speed on the typewriter since using the phonograph.

As to the range of work, the variety could scarcely be greater. Descriptions of the machinery used in operating the greatest manufacturing plants of the country, figures giving the statistics of banks, life insurance companies and finan-

cial institutions; articles containing technicalities of varied kinds, and biographical sketches—all record themselves perfectly and clearly and are copied with ease. As to simple business letters, the capabilities of the machine are unlimited.

From what I have said it may be inferred that I am somewhat of an enthusiast in regard to the phonograph. That is true; but it is only because of the increased capacity it gives me for better work. That it suits the firm employing me is amply proved by the fact that they contemplate increasing the number of phonographs in use in the office. JOHN W. LEONARD.

CHICAGO, March 30, 1892.

◆◆◆

For the Eye of the Kansas Phonograph Company.

The following named, from the Kansas delegation in Congress, use phonographs in Washington, under lease from the Columbia Phonograph Company:

Senator Perkins, two; Senator Peffer, two; Representative Jere Simpson, one; Representative Baker, one. *The National Economist*, the organ of the Farmers' Alliance, has three phonographs in service in Washington; while J. H. Turner, the secretary of the Farmers' Alliance, uses two.

The National Republican Committee, whose headquarters are in Washington, have leased two Edison phonographs to aid in the dispatch of correspondence during the coming campaign. The committee is located in the great granite building of the Washington Loan and Trust Company, where there are now seventeen phonographs in business use.

◆◆◆

Arthur E. Smith, the efficient and late successful manager of the Cleveland branch of the Ohio Phonograph Company, has resigned. Mr. Smith is an intelligent and energetic gentleman, fully conversant with the business, and anyone in need of a wide-awake manager would do well to communicate with him at Cleveland, Ohio.

PHONO GRAM.

An American lady recently in London says, "We had a most delightful dinner in a London restaurant just before I sailed, and by paying a shilling extra we had the entree to ten of the most prominent theaters without leaving the table. This was done through the phonographs that connected with the theaters. We heard everything in the most marvelously distinct way. I selected the opera then running at the Savoy, and I heard every note of the singing, the dialogue, and the recitatives. Even the applause when the curtain fell, the buzz in the audience, the fluttering of fans were so distinct that I felt almost awestruck. We ought certainly to have something of this sort in New York."

The lead nickel man has been having a circus all to himself in Leavenworth, Kansas, but unfortunately the manager succeeded in spotting his man, and found that "John Jones" had a handful of these slot-machine defrauders in his pockets. The police took charge of him, and will place their queer collection with other curiosities. He is a young man, and a coal miner.

The slander suit brought by Col. Ingersoll against Dr. C. A. Dixon will be most interesting, as it involves the introduction of a phonograph as a means of communicating alleged slanderous statements. Dr. Dixon's sermon contained an allusion to Col. Ingersoll as being a man who was employed to corrupt the morals of the young, but Dr. Dixon says that when he came to deliver his sermon, he left out this portion entirely, and that he had uttered them only into his phonograph. The instrument ground them out to his private secretary, who put them into the sermon. The question will be, is it slander to address a false and malicious statement to a phonograph?

Three men were arrested lately for attempting to pass lead nickels into the Edison phonographs in New Haven. The case was called up before United States Commissioner Wm. A. Wright, and the phonograph agent showed four hundred counterfeit coins that had been taken from one machine in a saloon. These coins represented the face value of \$5. The prisoners were held in bail for \$1,220. This is the first case of the kind in this country.

An interesting and instructive lecture was delivered recently by Dr. J. Mount Bleyer, before the students of Bellevue Hospital Medical College. The doctor has one thousand four hundred wax cylinders in his collection of phonograms which serve to reproduce the words and songs of famous actors and singers, and in many cases the record of their voices while undergoing treatment. The cylinders in operation give the normal and abnormal talking voice, stuttering, the growth of polypi, hoarseness, inflammation, asthmatic breathing as contrasted with normal breathing, the last stages of consumption and coughs of all kinds due to different diseases of the throat. The cylinders also produce the voice of a child in all stages of its growth, and especially the trained voice of a child as contrasted with the untrained voice. We will mention more of this interesting lecture anon.

The Edison talking dolls are highly prized by ladies of social prominence. They are often used as wedding gifts. Some of them are three feet high, and recite such songs as "Mary Had a Little Lamb," "Twinkle, Twinkle, Little Star," and other nursery ditties.

Phonographs are to be used in Mexican post offices for the benefit of the illiterate. The sender will go to the office, talk his message into the receiver of the phonograph, and when the cylinder reaches its destination the person addressed will be sent for, and the message will be repeated to him from another machine.

At the big blaze in the offices of the New Jersey Phonograph Co. lately, a phonograph was heard rendering "Home, Sweet Home," which sounded like the voice of some preternatural singer. The intense heat had started the instrument.

The fame of Dr. Frank Deems' electrical lectures has been trumpeted through the towns and localities which he has recently visited for the purpose of spreading before their citizens his intellectual treasures, and we hear that his success in the field is so great as to justify a continuance of this line of intellectual labor. At Atlantic City, at the splendid Girard College and other public halls in Philadelphia, these efforts were pronounced eminently successful. The students at Girard College were rapturous in their plaudits, and the encouragement Dr. Deems receives will doubtless be a stimulus to further endeavor in this direction.

CORRESPONDENCE.

CALDWELL & JUDAH, COTTON EXCHANGE
BUILDING,

MEMPHIS, TENN., March 24, 1892.

W. M. BENNER, ESQ., care THE PHONOGRAM,
New York.

DEAR SIR:—Referring to your "A Few Suggestions" in February PHONOGRAM:

Will you be good enough to tell me how to manage to always have a perfect knife for shaving cylinders. The firm I am with have some trouble in getting cylinders perfectly shaved. The knife on one machine was so imperfect it had to be replaced by a new one.

I think your plan of wearing the hearing tube in one ear a good one. Where do you get the different bulbs you speak of?

I find it an advantage to place a large rubber tube, three or four inches long, over the thimble which forms the connection between the speaking tube and diaphragm. By passing the hearing tube through the larger tube, it makes a support which prevents the hearing tube bending at too short a curve and partially shutting off the sound.

For the past week I have been having my phonograph back of the typewriter, and directly in front of me. I use a drop typewriter cabinet, and have taken off the hinge-top part of the desk. I have the phonograph raised three or four inches above the typewriter. I think this is the position that will suit me best.

Where do you have your phonograph in relation to your typewriter?

Your answer will much oblige,

Yours truly,

F. D. BENNETT, Cotton Exchange.

CHICAGO, March 30, 1892.

F. D. BENNETT.

DEAR SIR:—In reply to the above: It should be the duty of the company from whom you rent your machine to have a perfect knife placed on it. The fitting of a knife is a study. Of the many phonograph men I have known, not one in six knew how to set a knife. Experience, nice judgment and a keen eye alone can do it. A whole article could be well and profitably devoted to its description. An office machine without smooth cylinders is perfectly useless. If yours have much of a grating sound my advice is, have it exchanged. Your complaint is not an exception. I have seen office machines

in use where the grating sound from the cylinders was like a stone crusher. It is a discredit to the genius of Edison to permit their use.

The ear bulb I referred to is the graphophone or flanged ear piece. If you can get one it would be well to shorten its curve by placing it in boiling water for a few moments and bending it to the required shape. It will then lie against the cheek and remain in better position in the ear.

With regard to the relative position of phonograph and typewriter, there is no better plan than by using the regular typewriter table with the phono sunk to the level of the bed plate on the left end of the table, and your typewriter placed to the right of it. The lever of the diaphragm arm should be about on a level with the key board. It facilitates work, and you do not have to move your eyes from the typewriter when lifting the needle with the left hand. I have dispensed with the typewriter lift as an incumbrance. Many other little improvements might be suggested, but phonograph agents are indifferent to these things. If they paid more attention to the needs of typewriter operators there would not be so many machines returned after one or two months' trial.

Kindly excuse my lengthened reply.

Yours respectfully, W. M. BENNER.

2220 WABASH AVENUE, CHICAGO, March 30, 1892.

West Pennsylvania Notes.

CRESCENT COAL CO., COAL AND TOWING, 117
WATER STREET,

PITTSBURGH, PA., March 15, 1892.

WESTERN PENNSYLVANIA PHONOGRAM CO.

GENTLEMEN:—In reply to yours of February 25th, would say that I am very well pleased with your phonograph, which I have been using for almost a year, and do not see how I could get along without it. I am enabled to carry on my correspondence to a much better advantage than I ever could without it, and also have the advantage of dictating my letters, whether the typewriter be present or not, with the assurance that they will be faithfully and accurately copied in my absence.

We had some little trouble in getting the machine adjusted, but with a little patience we succeeded in mastering the details of the machinery, and feel that anyone can who has a little patience.

Very truly yours,
CRESCENT COAL CO.,
per J. W. AILES, Treas.

OFFICE OF THE MERCANTILE AGENCY R. G.
DUN & Co.,

PITTSBURGH, PA., February 24, 1892.

WESTERN PENNSYLVANIA PHONOGRAPH CO.

GENTLEMEN:—Replying to your inquiry, I beg to say that during the past six months the phonograph has become a permanent fixture in my office. I found it to take a short time to get thoroughly familiar with the instrument. Now I consider it a valuable acquisition to my office, and shall take pleasure in showing how it is used here to anyone whom you may send down.

Yours truly,

ARTHUR B. WIGLEY.

OFFICE OF HARRIS & NEWBERGER, LAW
REPORTERS,

PARKERSBURG, W. VA., March 11, 1892.

WESTERN PENNSYLVANIA PHONOGRAPH CO.

GENTLEMEN:—In reply to yours of the 9th inst., I take great pleasure in stating that Mr. Harris and myself have been using a phonograph in our work for nearly three years. We have done a large amount of work with it, in one case alone writing 2,500 pages of type-writing from it. I think it the coming amanuensis for office work. You are at liberty to refer to me at any time as to the good qualities of the phonograph. I am,

Very truly yours,

MYER NEWBERGER.

Queries.

WHITEWATER P. O., MANITOBA, }
March 26, 1892.

Editor PHONOGRAM:

I shall be greatly obliged if you can inform me on what terms I can buy a phonograph for exhibition in England, and if there is any difficulty in exhibiting it regarding the patent laws. Please place me on your books as a regular yearly subscriber. Very truly,

T. W.

[Answer.—The Edison United Phonograph Co., Mills Building, New York City, own all foreign patents for the phonograph. They say: "We regret we have not yet decided to supply machines for export." It would be impossible to exhibit the phonograph in England without the consent of this company. There would certainly be difficulty encountered under the patent laws.]

World's Fair Notes.

The dedication ceremonies of the World's Columbian Exposition, on October 12th, will be no doubt participated in by the President of the United States and his Cabinet, the Justices of the Supreme Court, and members of the Diplomatic corps at Washington. Many distinguished foreigners will also be present.

The mineral exhibit will be especially fine. Besides extensive collections of marble, granite and other building material, raw material from iron mines in plates sixty-nine to seventy per cent pure, and especially specimens of copper in its natural state as found in Michigan, will be exhibited. The "Calumet" and "Hecla" Mines will make the largest and most extensive exhibit of copper ever attempted.

The Woman's Building is almost completed as to its exterior, and only the interior decoration remains to be done.

The iron work is all completed on the Fisheries Building.

On the Transportation Building all the woodwork is finished with the exception of the cupola. All the buildings, in fact, are well under way.

The Electrical Building is fast approaching completion. The general plan of this building is a longitudinal nave one hundred and fifteen feet wide and one hundred and fourteen feet high. Longitudinal galleries extend along either side of the building, one hundred and fifteen feet wide and at a height of thirty feet above the main floor.

Printed applications for space are in the hands of the Director-General, Mr. Geo. R. Davis, and will be supplied on request.

A Spanish club has been formed to furnish interpreters and guides to the Spanish visitors, and who will otherwise provide for their comfort and wants. The project has the warm indorsement of the president of the Board of Lady Managers.

Editor PHONOGRAM:

The last number of THE PHONOGRAM was well received here. It seems to be the universal opinion that improvement is manifest in every issue.

E. D. EASTON,
Pres. Columbia Phonograph Co., Washington,
D. C.

Reading Notices.

Mr. George A. Hill, manager of the Type-writer Exchange, 10 Barclay street, New York, sells and rents all makes of typewriters at one-half manufacturers' prices. Mr. Hill's long experience in the business and intimate knowledge of these machines is a guarantee, that purchasers will obtain only the best and at the lowest figures.

* * *

Mr. AtLee, the artistic whistler for the Columbia Phonograph Co., whose remarkable performances have been presented through the phonograph to so many admiring audiences, has sent to this office phonographic records of three very diverse musical combinations expressed in contrasting sounds. Two of these represent the notes of birds—a mockingbird and a bobolink; the third is the version of an air from the opera of Anna Bolena, known to most persons under the popular name of "Home, Sweet Home." This gentleman will receive propositions for rendering his novel and attractive style of music at concerts and opera halls from companies conducting these, as also from parties in quest of such entertainment at private residences. Mr. At Lee's address is in care of the Columbia Phonograph Co., Washington, D. C.

* * *

The American Writing Machine Co. (manufacturers of the Caligraph, 236 Broadway, New York) have doubled the capacity of their factory in the past year, and yet are not able to fill their orders. Can anything more be said for the merits of this machine?

* * *

If your battery is not working satisfactorily, and you are in doubt as to one that will, the Bradbury Stone, of Lowell, Mass., will do the business.

* * *

A patron of THE PHONOGRAM writes us, in discussing typewriters: "We have twelve operators on typewriters; we started with one Barlock, now we have nine in use, and when we change, it is for the Barlock."

* * *

If any of our patrons are not satisfied with quality and prices of their typewriting supplies, write to the pioneer firm of John Underwood & Co., 30 Vesey street, New York, and they will find the change advantageous.

Authors and Publishers.

The Counting House, published by A. Arthur Reade, at Leicester, England, a practical journal of commerce and the arts, has been laid upon our editorial table, with the invitation to exchange attached to its cover. We have to say of this journal that it seems to bend all its powers (and they are evidently not insignificant) to the promotion of the cause it advocates, while it affords to those not immediately interested in the line of its labors, instructive and original matter.

In forwarding to its address THE PHONOGRAM, we especially indicate for its perusal those articles in which the utility of the phonograph as an adjunct to the typewriter and a help to the stenographer are earnestly presented.

The *Cosmopolitan* for April, 1892, appears in due time on our table, with a quantum of literary matter more than usually instructive and amusing. The article on Count Tolstoi is, to the well-balanced minds of average Americans, the solving of a riddle; for the comparatively small number of our countrymen who have read of his works are puzzled to understand his character and aims, so contradictory and illogical do they appear.

But the astute and clear mind of the writer who has taken in hand the task of elucidating this human problem, photographs him with her pen, and we are thus enabled to sound the depths and measure the height of his follies and his genius. It is only under the sway of a government such as exists in Russia that a similar personality could be found.

The descriptions and illustrations of Genoa are full and well executed; the exposé of marital customs and rights in Germany a needful revelation for American women.

We have received the card of invitation to the Commencement reception given at Memorial Hall, Lucas place and Nineteenth street, St. Louis, Mo., on March 31st, by the Faculty and Graduating Class of the College of Pharmacy, and hereby tender our acknowledgments for the compliment.

One would find it difficult to credit a statement that a journal founded upon the requirements and necessity for good form in the conduct of advertising would repay perusal by an ordinary reader. Yet such is the case with that of The Art in Advertising Company, 80 Fifth avenue, New York City, Mr. H. C. Brown, vice-president. This magazine is a model of tact and appreciation of the fitness of things. "Comparisons are odious," says Shakespeare; therefore we make none in this instance, but the editor is so ingenious that we are reminded of the story of a French chef who boasted that he could make soup out of a stone. "How is it possible?" asked a bystander. "Oh!" replied the Frenchman, "only give me a pinch of salt and a sprinkling of pepper with an onion, some parsley and a little good stock of beef, and with the addition of my stone you will have an excellent broth."

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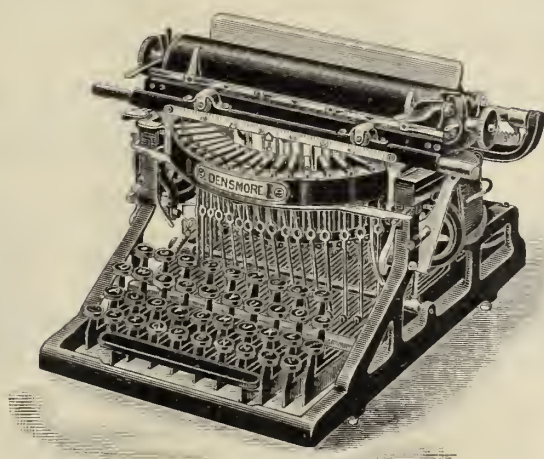
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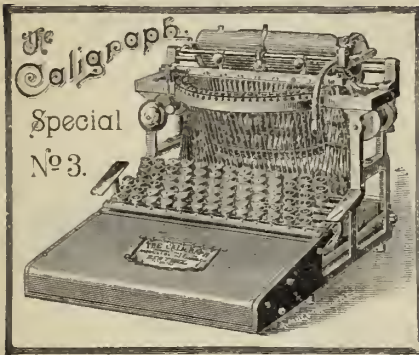
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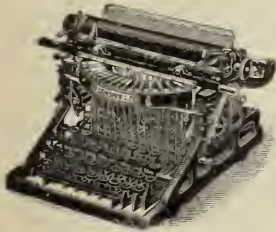
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